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Joop de Boer[*1])
Hanna Schösler[2])

[1]) Institute for Environmental Studies, VU University, Amsterdam, the Netherlands
[2]) University of Bayreuth, Bayreuth, Germany

* Address for correspondence:
Joop de Boer
Institute for Environmental Studies,
VU University
De Boelelaan 1087
1081 HV Amsterdam
The Netherlands
E-mail: joop.de.boer @vu.nl
Fax: +31 20 5989553
Phone: +31 20 5989555

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Abstract

This study uses the consumer affinity concept to examine the multiple motives that may shape consumers' relationships with food. The concept was applied in a study on four broad product types in the Netherlands, which cover a wide range of the market and may each appeal to consumers with different affinities towards foods. These product types may be denoted as 'conventional', 'efficient', 'gourmet' and 'pure'. A comparative analysis, based on Higgins' Regulatory Focus Theory, was performed to examine whether food-related value motivations could explain different consumer affinities for these product types. The affinities of consumers were measured by means of a non-verbal, visual presentation of four samples of food products in a nationwide survey (n = 742) among consumers who were all involved in food purchasing and/or cooking. The affinities found could be predicted fairly well from a number of self-descriptions relating to food and eating, which expressed different combinations of type of value motivation and involvement with food. The analysis demonstrated the contrasting role of high and low involvement as well as the potential complementarity of promotion- and prevention-focused value motivation. It is suggested that knowledge of the relationships between product types, consumer affinities and value motivation can help improve the effectiveness of interventions that seek to promote healthy and sustainable diets in developed countries.

Keywords

Consumers; value; motivation; affinity; food products

51 Highlights

52 A comparative analysis examined consumer affinities for particular types of foods.

53 These may be denoted as conventional, efficient, gourmet and pure products.

54 Differences in the affinities could be predicted by food-related value motivation.

55 Key was consumers' degree of care about the quality of their food-related judgments.

56 Food affinities are a valuable concept for designing consumer interventions.

57

Introduction

Understanding the forces that can bring consumers and food products together is key to improving healthy eating and promoting "fair, culturally-appropriate, biodiversity-based, sustainable diets" (Lairon, 2012; p. 35). The achievement of these objectives requires an ethical transformation of consumer behavior and a cultural transformation of products and markets (Holt, 2012; Lang, 2010; 2012). However, as Scholliers (2007, p. 337) notes, consumers do not just experience market influences: they co-create them by their expectations, language and expenditures. Therefore, an important strategic question in this context is whether and how the transformations can be linked to consumers' food-related *value motivation*, i.e. motivation to have desired results (Higgins, 2012). When dealing with this question, researchers should avoid being either too abstract in terms of values or too specific in terms of product likings. The present paper puts forward the view that the analysis of broad affinities may be a promising intermediate strategy. An *affinity* is a favorable and primarily affectively based attitude toward someone or something, such as food that has been produced in a special way or in a particular country, which can affect buying decisions directly and independent of product judgments (Oberecker, Riefler, & Diamantopoulos, 2008). The affinity construct may be one of the factors to explain the coincidence of pairs of items in a market basket (Russell & Petersen, 2000). In particular, a comparative analysis of different affinities can give highly relevant information on the forces that shape consumer choices. These forces may be understood metaphorically as a kind of reciprocal affinity (see Jost, Federico, & Napier, 2009), i.e. consumers can be said to choose particular types of products, but there is also a sense in which products 'choose' consumers, for instance, via shops they visit and the displays they look at. In the present paper, we examined differences in affinities for four broad types of products, which cover a wide range of the market in the Netherlands and may be denoted as 'conventional', 'efficient', 'gourmet' and 'pure'. The aim to compare affinities for these types of foods was suggested by an earlier study (de Boer, Hoogland, & Boersema, 2007), which identified four main ways of relating to food, based on combinations of different levels of involvement with food and the two types of value motivation (i.e. prevention and promotion) from Higgins' Regulatory Focus Theory (RFT, see Higgins, 1997; 2012). The current paper describes a consumer survey that measured differences in affinities by means of non-verbal, visual

presentations of four samples of food products and tested whether the differences could be predicted by combinations of involvement and type of value motivation, after controlling for demographic variables.

Cooking and eating are forms of goal-directed behavior with many complementary and competing motivational aspects, such as the need to strive for variation, to make balanced choices, to avoid 'bad' food, and to preserve favored combinations of use situations, meals, products and ingredients (e.g. Fischler, 1980; Rozin, 1976; Scholliers, 2007). These aspects can be translated in the language of short self-descriptions, which may help consumers recognize how they relate to food (e.g. "I am curious about new tastes"). Although the self-descriptions can be analyzed in several ways, it is important to assess their consistency with some theoretical principle, as self-reports are themselves behaviors that require dynamic interpretation (Ryan & Deci, 2000). De Boer and colleagues (2007) developed a number of self-descriptions relating to food and eating in order to assess how they can be arranged in a structure of underlying complementary and competing motivations, which revolve around two axes: level of involvement with food and type of value motivation (i.e. promotion- or prevention-oriented). The concept of *involvement* refers to the differences between consumers in terms of how important food and eating are in an individual's life (Marshall & Bell, 2004; Ohly et al., 2013; Verbeke & Vackier, 2004). Value motivation can be divided into ensuring better results from actions (with a promotion focus) and ensuring against worse results from actions (with a prevention focus) (Higgins, 1997; 2002; 2012). *Promotion-focused motivation* is basically concerned with obtaining nurturance (e.g. 'good' food); it underlies concerns with the pleasurable presence of positive outcomes, including accomplishments, aspirations and ideals. In contrast, *prevention-focused motivation* is concerned with obtaining security and avoiding negative outcomes (e.g. 'bad' food); it underlies concerns with safety and fulfillment of responsibilities. An individual's momentary focus on promotion or prevention will depend on his or her personal history and circumstances induced by the situation at hand. Hence, the distinction between promotion and prevention gives a broader theoretical interpretation to the omnivore's paradox between novelty and tradition (Fischler, 1980; Rozin, 1976; Scholliers, 2007).

In a nationwide survey among consumers in the Netherlands, de Boer and colleagues (2007) found four main ways of relating to food. The set of self-descriptions could be classified in terms of involvement with food and type of value motivation, and the underlying structure could be validated by showing that the self-descriptions were differentially correlated with the values of Schwartz' value model (see Schwartz et al., 2001). The latter approach was chosen, because there is no generally accepted standard measurement tool to assess all the aspects of regulatory focus (Haws, Dholakia, & Bearden, 2010). Importantly, the results were also in line with the literature on specific motivational aspects of food. The big picture is that valuing a varied and adventurous taste (e.g. Ullrich, Touger-Decker, O'Sullivan-Maillet, & Tepper, 2004; Wycherley, McCarthy, & Cowan, 2008) can be categorized as *promotion-oriented and highly involved*, whereas being easy about food (e.g. Buckley, Cowan, & McCarthy, 2007; Candel, 2001) can be termed as *promotion-oriented and lowly involved*. Also, giving reflective attention to the wider implications of food choices in terms of health, naturalness of the food, weight control and ethical considerations (e.g. Pollard, Steptoe, & Wardle, 1998; Schifferstein & Oude Kamphuis, 1998; Torjusen, Lieblein, Wandel, & Francis, 2001) can be classified as *prevention-oriented and highly involved*, whereas preferences for a familiar meal (e.g. Kitsawad & Guinard, 2014; Pula, Parks, & Ross, 2014) can be labelled as *prevention-oriented and lowly involved*. Hence, although these four ways of relating to food should not be seen as fixed, culturally invariant categories, they may be very suitable for a comparative analysis of affinities.

The link between affinities and value motivation is based on the experiences that underlie an individual's evaluative sensitivity to a particular type of products. Analysis of motivational differences in relation with consumption patterns has led to interesting insights into how consumers can learn to associate different products with either promotion or prevention (Higgins, 2002; Zhou & Pham, 2004). Higgins' theory specifies that consumers get the experience of 'feeling right' about what they are doing if there is a psychological 'fit' between their goal orientation (promotion or prevention), their strategy to reach the goal (eager approach or vigilant avoidance), and goal-relevant attributes of the choice options (e.g. promotion-related or prevention-related product benefits). As consumers tend to be most attentive to

product information that is fitting with their predominant goal orientation, they may learn to prefer either products with a promotion benefit or the ones with a prevention benefit and apply their choice strategy over and over again, rather than reconsider it on every occasion (Zhou & Pham, 2004). This may result in an increased affinity for particular products. In terms of product properties, for example, luxury and technological innovation may appeal to promotion-oriented consumers, whereas safety and reliability may appeal to prevention-oriented ones (e.g. Chernev, 2004; Higgins, 2002).

It should be noted, however, that the relationship between promotion and prevention is not a simple one; Higgins (2012; p. 412) suggests, for example, that good cooking may involve both promotion and prevention aspects working together. As the two aspects are conceived as distinct but not bipolar constructs, individuals and situations can be either relatively high in both promotion and prevention focus concerns or they can be relatively low in both. Another point is that the role of promotion and prevention focus depends on the individual's level of involvement in the activity (Avnet, Laufer, & Higgins, 2013; Wang & Lee, 2006). The notion that promotion and prevention aspects may work together is relatively new (Bohns et al., 2013; Higgins, 2012). The notion implies that it may be advantageous or even necessary for an individual to switch between regulatory strategies (approach or avoidance) and to focus on other aspects of an issue that require attention. There is growing evidence that such a switch is more likely under conditions of high involvement (Wang & Lee, 2006; see also Avnet et al., 2013). In this way, promotion and prevention aspects may become complementary, which can make them both more accessible for highly involved individuals (Higgins, 2012).

These complexities suggest that a comparative analysis of more than two product types is needed to assess their relative appeal to promotion- and prevention-focused individuals. Building on the work by de Boer and colleagues (2007), the present study examined how the set of self-descriptions can help to predict differences in consumer affinities evoked by four broad types of products, often sold by different outlets. Theoretically, it may be expected that consumers with an affinity for food items purchased in a *gourmet* specialty shop will have a promotion focus and a high level of

involvement (e.g. valuing a varied and adventurous taste). Those with an affinity for *efficient* foods, sold in convenience packaging, may also have a promotion focus but a low level of involvement (e.g. being easy about food). Consumers with an affinity for *pure* ingredients, sold at a natural food shop, may have a prevention focus and a high level of involvement (e.g. giving reflective attention to the wider implications of food choices). Those with an affinity for products from a *conventional* supermarket may also have a prevention focus but a low level of involvement (e.g. preferring a familiar meal). These affinities have been studied in previous work as separate market segments, such as segments with a preference for convenience foods (Brunner, van der Horst, & Siegrist, 2010; Buckley et al., 2007), specialty foods (Huddleston, Whipple, Mattick, & Lee, 2009; Wycherley et al., 2008), or, in particular, organic foods (Baker, Thompson, & Engelken, 2004; Bezawada & Pauwels, 2013; Hughner, McDonagh, Prothero, Shultz, & Stanton, 2007; Padilla Bravo, Cordts, Schulze, & Spiller, 2013). These studies show that each of the segments may be described in terms of socio-demographic characteristics (i.e. age, gender, level of education, income, and household size) and particular motives that provide pragmatic (real-world) descriptions of consumers (e.g. ‘the adventurous’). However, these studies are not based on a theoretical and comparative analysis of motivation that can give insights into the complementary or competing roles of motives for how consumers relate to their food.

A challenge in predicting affinities for types of foods is to ensure that the descriptions of the product attributes do not overlap with the self-descriptions, as this would be a source of common method bias (Podsakoff, MacKenzie, & Podsakoff, 2012). One way to avoid this problem is to take advantage of the importance of visual cues for food selection (Sengupta & Zhou, 2007; Simmons, Martin, & Barsalou, 2005) by asking consumers to choose between pictures without descriptive text, showing samples of food items or food retail outlets. It is well known that pictures are attention getting devices and that they can lead to greater information processing than would occur otherwise (Finn, 1988). As the study was meant to highlight the impacts of motivational factors, it was decided to neutralize the potential role of economic factors by asking the participants about their affinity without referring to their willingness to pay. The questionnaire used was adapted to the situation in the

Netherlands and the pictures of food items and food retail outlets were meant to be easily recognizable by Dutch consumers. An additional advantage of the non-verbal approach is that it may reveal differences in affinity for types of foods between migrants and natives, which is relevant for the generalizability of the results. As noted by van Otterloo (2000), the Dutch have never succeeded in being proud of their cuisine. This means that their food choices, on average, tend to favor the status quo and not to overemphasize the importance of food. Another relevant characteristic is that food-related gender differences are much smaller in the Netherlands than in traditional societies (Schösler, de Boer, Boersema, & Aiking, 2015).

In sum, this research went beyond existing work in several ways. Most importantly, it compared differences in consumer affinities evoked by four broad types of products whereas existing work focuses on specific types of food products or ideas. In recent years, RFT has increasingly been applied to study food-related messages and choices, such as the responses of students to messages promoting fruit and vegetable consumption (Spiegel, Grant-Pillow, & Higgins, 2004), the choice behavior of impulsive eaters (Sengupta & Zhou, 2007), consumers' choices for responsible meat (de Boer et al., 2007) and intentions to adopt omega-3 enriched products (Tudoran, Scholderer, & Brunsø, 2012). However, several authors note that there is a basic lack of understanding of how regulatory focus relates to food choices (Pula et al., 2014). Revealing the relationships between food involvement, type of value motivation and broad affinities may be particularly helpful in this context.

Our approach involved three complementary analyses. First, a multidimensional scale analysis was carried out to verify with new data how well the set of self-descriptions relating to food and eating represented the underlying conceptual structure. Second, the relationships were examined between the differences in consumer affinities for the types of foods and a set of preferences for food retail outlets, which were meant to cover a broad range of the market. Third, a multinomial logistic regression was used to identify the extent to which the self-descriptions predicted the differences in consumer affinities, controlling for the demographic variables age, gender, level of education, income, and household size. In order to explore how the self-descriptions might complement or counteract each other, they were treated as separate predictors.

Method

Sample, participants and procedure

Embedded in a nationwide survey among consumers with Internet access (about 93% of the population in the Netherlands), two sets of photos were used to measure affinities for types of food products and preferences for food retail outlets, in addition to questions that covered various aspects of food consumption. In November 2010, a representative sample was drawn from a large panel of persons who are willing to participate in web-based research for a small reward, which they can keep for themselves or donate to charity (*n*= 1083, response rate in two weeks 68%). The questionnaire included modules with items on food purchasing and cooking, self-descriptions relating to food and eating, meal preferences and the main demographics. The module on meal preferences referred to meat and meat alternatives and was described in a separate paper (Schösler, de Boer, & Boersema, 2012). Another, brief, communication focused on the consumption of snacks (de Boer, Schösler, & Boersema, 2013). For the present analysis of affinities for types of foods, only those participants were studied who were involved in food purchasing and/or cooking (*n*= 742). Their main demographics are presented below.

Measures and analyses

Self-descriptions relating to food and eating

The set of self-descriptions relating to food and eating (also called the Food Involvement and Focus Questionnaire, FIFQ) was developed by de Boer et al. (2007), drawing on an approach adapted from Schwartz et al. (2001). The items were written in terms of short, positively worded portraits of persons who show different degrees of involvement in food, both in promotion-oriented and prevention-oriented ways (see Table 2). The female version of a highly involved promotion-oriented item is: “She feels proud of her taste. She believes that her food choices are very attractive.” The lowly involved alternative is being easy about food. An example of a highly involved prevention-oriented item is: "She is very mindful of food. She wants to eat sensibly.” In this case, the lowly involved alternative is a preference for ordinary meals. Participants were asked to compare the portrait to themselves and to rate on a 7-point scale "how much like you" the person is. Following Schwartz et al. (2001), the answers were centered to correct for individual differences in average rating levels.

All the 11 items from the original set and one new item were used in the analysis. The new item ("She likes many different foods. She is also a great taster") was meant to better represent the adventurous taster.

Affinities for types of foods

The participants were asked about their affinity using a set of four photos, each taken from a different set of real food products (Figure 1). The four photos were meant to represent a more-or-less complete range of the main product types, sold by different types of retailers. The choice of the products was informed by personal interviews by one of the authors with consumers from each supposed type, partly published in a separate paper (Schösler, de Boer, & Boersema, 2013). Notably, it was not necessary that the pictures perfectly mirrored particular market segments, but only that there was enough diversity to reveal different affinities. Also the pictures were not meant to emphasize differences in healthy or sustainable choices. Picture 1 stood for conventional food choices in the Netherlands. The items included potatoes, broccoli, leak and minced meat, as well as white bread and an instant meat sauce. Picture 2 stood for the importance of quick and efficient meals. The items included convenience foods in convenience packaging, such as instant vegetables, instant meat replacers and crisps. Picture 3 was meant to reflect a gourmet orientation. It showed, for example, fresh fish, fresh vegetables, luxurious chocolate and coffee products and a baguette. Picture 4 stood for the assortment of natural food shops. It displayed pure ingredients, beans, rice wafers, nuts and pumpkin and brown bread. After showing the participants the set of four pictures, their food type affinity was measured by asking them to indicate which picture would fit best with them.

FIGURE 1

As a rough check on the differences between consumer affinities, the participants were also shown a number of photos of food retail outlets, again without verbal information (Figure 2). In this case they were asked to select up to two preferred outlets. The seven photos were meant to represent a more-or-less complete range of the main outlet types. Picture A showed a regular Dutch supermarket that may particularly appeal to convenience-oriented customers. Fresh products are often sold

packaged and ready to use. Picture B indicated a small natural foods shop that consumers may associate with organic and bio-dynamic products, as well as special gourmet items that are hard to find in regular supermarkets. Picture C was taken from an outdoor market that emphasizes fresh produce and unprocessed foods. Picture D exposed a typical ethnic market that again offers fresh produce as well as more exotic foods. These shops usually contain a meat counter that sells fresh meat cuts, especially suitable for ethnic cooking or for the gourmet who prefers to cook from scratch. Picture E depicted a typical discount supermarket that will give less aesthetic attention to food. There is usually an emphasis on conventional foods and bulk sales, fresh produce is displayed less frequently. Picture F showed a take-away ('traiteur') that will sell ready-made meals within a higher market segment. Thus, there is a focus on gourmet, but there is also an element of efficiency involved for the customers with an adventurous taste but little time or involvement to prepare food themselves. Picture G depicted a typical smaller neighborhood supermarket that will mainly cater to a more conventional as well as a more convenience seeking customer.

FIGURE 2

Background variables

The main background variables were gender, age, level of education, household size and migration status. The distinction between natives and migrants was based on a question on country of birth. A question on household income produced a high number of missing values (27%) and was left out of the multivariate analyses.

Analyses

All analyses were conducted with SPSS 21 for Windows. The structure of relations among the self-descriptions was examined through multidimensional scaling using PROXSCAL. This method was applied with interval proximity transformations, Euclidian distance measures, and Z-score transformations of the ratings. Univariate and multinomial logistic regression analyses were used to test the differences between the chosen types of foods for the predictor variables. One-way ANOVAs with Bonferroni's post-hoc test ($p < .05$) were used for interval data, chi square for

355 categorical data. For those variables having a significant univariate association,
356 multinomial logistic regression was used to compare prediction models.
357

Results

The participants who were active in purchasing and/or cooking were more often women (66%) than men (34%). This can be attributed to different gender roles in the households, although gender differences in the Netherlands tend to be much smaller than those in traditional societies. As shown by Table 1, there were large differences in demographics between the active and the non-active women, but less so between active and non-active men. The small group of non-active women was relatively young and belonged to larger households. The non-active men also belonged to larger households and had more often a low level of education. That is, the food-related activities of women and men differed less from each other as their level of education increased. Hence, the differences between the active and non-active participants were an effect of prevailing gender roles and household size.

TABLE 1

The first analysis was carried out to verify how well the set of self-descriptions represented the underlying conceptual structure. The positions of the self-descriptions (FIFQ items) in the two dimensional structure of involvement and type of value motivation are described in Table 2 and visualized in Figure 3. Table 2 describes the mean ratings and standard deviations of the items and it presents the spatial coordinates of the MDS solution [model = interval, normalized raw Stress = .019 (two-dimensional solution) versus .101 (one-dimensional)], plotted in Figure 2. For reasons of presentation, the coordinates were mirrored on both axes. The horizontal dimension discriminated the self-descriptions in terms of level of involvement. Low involvement meant that meals were not considered important; high involvement was, for instance, expressed by a preference to vary one’s meal. In addition, the vertical dimension separated the items into, on the one hand, promotion-oriented motivation, such as enjoying eating well (involvement high) or eating plenty of foods (involvement low), and, on the other hand, prevention-oriented motivation, such as showing respect for food (involvement high) or preferring ordinary meals (involvement low). In sum, the results successfully reproduced the four distinct regions of items that represent each of the four combinations of involvement and type of value motivation.

TABLE 2

FIGURE 3

The second set of analyses examined the relationships between the affinities for types of food and the preferences for food retail outlets. The participants had different affinities for the types of food products. A large number (50%) chose the conventional type (picture 1). Picture 3 (gourmet) was chosen by 33%, picture 2 (efficient) by 10% and picture 4 (pure) by 7%. The participants could choose one or two preferred outlets. The results showed that 49% chose picture A (regular supermarket),), 32% C (outdoor market), 32% E (discount supermarket), 30% D (ethnic market), 15% G (neighborhood supermarket), 13% B (natural foods shop), and 12% F (take-away 'traiteur'). The preferences for the regular supermarket (A) and the outdoor market (C) were not significantly related to the food type affinities (chi square, *p*-values > .05). There was a tendency ($p < .10$) that those who chose the neighborhood supermarket (G) had more affinity for conventional foods (59%). Four other associations were significant (*p*-values < .05). Those who preferred the discount supermarket (E) had more affinity for conventional foods (71%) but less affinity for gourmet (17%) or pure foods (3%); those who preferred the natural shop (B) had more affinity for gourmet (41%) or pure (26%) foods but less affinity for conventional foods (24%); and those who preferred the take-away 'traiteur' (F) or the ethnic market (D) had more affinity for gourmet foods (49% and 40%, respectively). Affinity for efficient foods (on average 10%) was not related to a preference for one of the outlets. The variance in the food type affinities accounted for by the four predictors was satisfactory (Nagelkerke pseudo $R^2 = .164$). Hence, the affinities for types of food were largely consistent with preferences for outlets, although there was no simple one-to-one relationship.

The relationship between the affinities and the self-descriptions was examined by univariate and multivariate analyses. The univariate analyses showed that each of the self-descriptions was significantly (all *p*-values < .05) associated with the food type affinities. Additionally, the multivariate analysis indicated that the number of self-

descriptions as predictors of the affinities could be reduced from twelve to five without a substantial loss of explained variance (Nagelkerke pseudo R^2 changed from .293 to .269). The results of the latter regression analysis, in which the conventional group was used as the reference category, are summarized in Table 3. Descriptive information on how the standardized predictor variables ($M = 0$, $SD = 1$) differed between the food type affinities is presented in Table 4. The results show that the conventional group had relatively low scores on the items, except for "prefers ordinary meal" ($M = .44$, see the first column of Table 4), which suggests prevention-oriented motivation with a low level of involvement. The most distinguishing features of the efficient group, compared to the conventional group in the regression, were their higher scores on "easy about cooking" and, to a lesser extent, on "mindful of food" (see the first column of Table 3). The mean of "easy about cooking" was .67 in this group, which was the highest of all groups (second column of Table 4) and suggests promotion-oriented motivation with a low level of involvement. The most distinguishing features of the gourmet group, compared to the conventional group, were their higher scores on "likes to vary", "prefers natural products" and a low score on "prefers ordinary meal" (second column of Table 3). The mean of "likes to vary" was .40, which was relatively high (third column of Table 4), suggesting promotion-oriented motivation with a high level of involvement. The most distinguishing features of the pure foods group, compared to the conventional group, were higher scores on "prefers natural products" and "mindful of food", and a very low score on "prefers ordinary meal". The means of "prefers natural products" and "mindful of food" were 1.0 in this group (fourth column of Table 4), suggesting prevention-oriented motivation with a high level of involvement. In sum, the four affinities were significantly and meaningfully associated with one or more self-descriptions from each of the four quadrants in Figure 3.

TABLE 3

TABLE 4

The relationship between the affinities and the background variables was also examined by univariate and multivariate analyses. The univariate analyses showed

that age, level of education, income category, household size and migration status, but not gender, were significantly (all *p*-values < .05) associated with the food type affinities. The association with income category was not very strong (Chi square = 17.7, *n*= 538, *df* = 6, *p* < .01); a higher income was related to a lower affinity for the conventional type and higher affinities for the three other types. The information on the associations with age, level of education, household size and migration status is presented in Table 3 (regression) and Table 4 (standardized means). The means in the conventional group did not differ much from the general means of the variables. The results of the regression showed that young participants had relatively more affinity for efficient foods. Those with a higher level of education had relatively more affinity for efficient, gourmet or pure foods. Participants with larger households had relatively less affinity for gourmet foods. Migrants had relatively more affinity for pure foods and gourmet foods. The four background variables produced a Nagelkerke pseudo R^2 of .177. Table 3 reports the variance in the food type affinities accounted for by the self-descriptions without (model 1) and with the background variables (model 2). Controlling for the background variables did not change the odds ratios of the self-descriptions in any significant way; Nagelkerke pseudo R^2 increased from .269 to .350. Hence, the background variables explained 8% additional variance in the food type affinities.

Discussion

This study has shown that there are interesting and strategically relevant connections between types of products (often linked to preferred retail outlets) and consumer affinities. These connections are based on multiple motivational forces, which means that the affinities should not be understood as fixed categories. The analysis identified a set of promotion- and prevention-oriented self-descriptions at high and low levels of food involvement that helped to explain why certain consumers, after they had been exposed to a more-or-less complete range of product types, chose a certain type by preference over others. Each of the affinities was related to at least one of the self-descriptions in the corresponding quadrant of food involvement and type of value motivation, after controlling for a number of demographic variables. This result agrees well with our expectations. Interestingly, moreover, the links between the four affinities and the four motivational quadrants were not one-to-one, mutually exclusive correspondences. As food has many aspects, more than one motivational strategy is required. Affinities for gourmet and efficient foods were related to self-descriptions that reflected not only a promotion focus but also to a certain extent a prevention focus. This finding underlines that promotion and prevention are not bipolar. In contrast, high and low involvement can be understood as each other's opposites; i.e. the affinities for gourmet and pure foods were related to negative responses to a low involvement item. Hence, this study adds new knowledge to the existing literature on product types, consumer affinities and value motivation.

The comparative analysis demonstrated the contrasting role of high and low involvement as well as the potential complementarity of promotion and prevention. A high level of involvement makes individuals care more about their judgments (e.g. Avnet et al., 2013). This may contribute to the development of an affinity for gourmet foods or pure foods as both can give consumers the experience of ‘feeling right’ about the quality of their choices. In addition, promotion and prevention may provide complementary frames. For instance, our results indicate that naturalness and freshness were important qualities for consumers with an affinity for gourmet foods or pure foods. Underlying this finding may be the importance of different framings of the natural freshness of pure foods. The attribute of freshness can be framed in terms of luxury and delight (promotion of a gain) or a health-related necessity (prevention

of a loss), which means that it can facilitate the pursuit of both promotion and prevention goals.

Consumers with a low level of involvement will be less focused on the quality of their judgments and their choices, but more on how they experience the outcomes (Avnet et al., 2013). A low level of involvement in combination with a promotion focus was associated with an affinity for efficient products. A possible explanation for this link is that efficient products tend to be more technologically advanced and easy to use ('time saving') than conventional products, which may be attractive for individuals with a promotion-focus (Higgins, 2002; Westjohn, Arnold, Magnusson, Zdravkovic, & Zhou, 2009). An affinity for conventional products was connected with the combination of low involvement and a prevention focus. The latter is not surprising, as individuals with a prevention focus are more committed to maintaining and preserving the status quo (Chernev, 2004).

The fact that the conventional products were chosen by half of the participants cannot be attributed to value motivation only. The results indicate that income and factors directly related to income, such as a higher level of education and a small household size, also played a role in the answers. As the latter variables are characteristics of specialty food buyers (Huddleston et al., 2009; Wycherley et al., 2008), a plausible explanation of this income-related effect is that the participants took the estimated price of the products into account when they chose for the conventional type. Their price sensitivity may also have played a role; the purchase behavior of households is affected by stable differences in their sensitivity to marketing mix variables (price and display) across multiple product categories (Ainslie & Rossi, 1998). Other cultural factors related to education and migration status had an effect too: higher educated participants and migrants did not appreciate the conventional type of foods very much, which may be seen as being 'typically Dutch'. In sociological terms, this difference in appreciation may be interpreted as resulting from both status-oriented consumption and personal taste experiences (Bourdieu, 1984). A final point to be noted is that gender did not make a difference here; although there are gender differences in food-related motivation (Schösler, de Boer, & Boersema, 2014), the

lack of difference may be due to the fact that all the participants were involved in food purchasing and/or cooking.

Although the results merit further validation, we believe that our analysis has strategic implications for the two main types of intervention that seek to promote healthy and sustainable diets in developed countries (Holt, 2012; Lang, 2010). The first type comprises strategies that aim to achieve an ethical transformation of consumer behavior. These strategies presuppose that consumers care about the quality of their judgments, as this can make them sensitive to the issues raised in an ethical appeal (e.g. in the form of labels or more personal recommendations). A sufficiently high level of involvement can motivate consumers for a change and keep them motivated while they are coping with demotivating tensions and contradictions. The participants with affinities for gourmet foods and pure foods may fit into this category. Moreover, these consumers may feel that a proposed change is right for an individual with their identity when they recognize its promotion- or prevention benefits. Although some studies suggest that it may be easier and more convincing to market sustainable products with prevention-framed appeals (Bullard & Manchanda, 2013), the potential contribution that promotion motivation can make should not be neglected. The relationship between affinities and value motivation can help to understand the full range of the potential promotion- or prevention benefits of products (or diets), for instance, in terms of ideals to be achieved or responsibilities to be met. The relatively small group who had an affinity for pure foods demonstrated that consumers may seek solutions to food quality concerns through a return to a more ‘physical’, more ‘natural past’ in a prevention-focused manner (e.g. de Boer, 2010). The gourmet group may focus on the promotion benefits of luxury, technological advancement, and the cultural status associated with this type of food. Current trends among gourmets seem to highlight authentic qualities as geographic specificity, ‘simplicity’, personal connections or historicism (Johnston & Baumann, 2007), which might be combined meaningfully with ethical improvements (e.g. eating less but higher quality meat).

As a relatively large group of consumers did not show high levels of care about the quality of their food choices, attempts to increase consumer awareness of health and sustainability issues will not be sufficient to change consumer patterns fast enough.

Such a change requires the second type of interventions, aimed at a cultural transformation of products and markets to move unsustainable markets toward more sustainable consumption (Holt, 2012; Lang, 2012). There are two features that especially characterize this type of intervention. First, the role of culture as a broad organizing factor is emphasized. Second, the attention shifts from the focus on one particular (healthy or sustainable) product to a broader focus on types of products. Interesting examples of these notions are attempts to create a new regional (Nordic) diet in accordance with dietary recommendations, e.g. more calories from plant foods and fewer from meat, more foods from the sea and the wild countryside (Mithril et al., 2012; van Dooren, Marinussen, Blonk, Aiking, & Vellinga, 2014). The Nordic diet was meant for the general population, but its acceptance was seriously limited by social and cultural barriers, in particular by a lack of affinity for its practical aspects (e.g. Micheelsen, Havn, Poulsen, Larsen, & Holm, 2014). Hence, it is important to develop a strategic perspective informed by insights into the links between affinity and motivation. A useful strategy is to redevelop and improve each type of products (conventional, efficient, gourmet and pure) so that they become more healthy and sustainable. A crucial advantage of this strategy is that it gives more structure to the problem to be solved allowing for specific measurable goals. In addition, consumers will be able to change the impacts of their food consumption without having to change their affinity. Recently, such an approach has been applied to reformulate 'junk food' ready-meals into nutritionally balanced pizzas without requiring change in eating habits (Combet, Jarlot, Aidoo, & Lean, 2014). Generally, the notion of a reciprocal affinity between types of consumers and types of products evokes the responsibility of food manufacturers, producers and retailers to develop sensitive strategies to create healthier and more sustainable food options for all kinds of consumers.

As food products and food concepts seem to be changing continually (Scholliers, 2007), knowledge of the relationships between broad types of products, consumer affinities and value motivation is of great importance. The hypothesized reciprocal influences between product types and consumer affinities offer promising opportunities for further research. One of the limitations of the current study is that the four types of food were not exhaustive. The picture of efficient foods, for instance,

was meant to stand for the consumption of quick and efficient meals, but it did not contain any reference to the more specific categories of ‘fast food’, ‘take-away food’ or ‘ready-to-heat meals’. The literature suggests that these various combinations of food, convenience and time-saving tend to appeal to consumers who have some characteristics in common, such as being young, but who are influenced by different motives and values (Botonaki & Mattas, 2010; Olsen, Menichelli, Sørheim, & Næs, 2012; van der Horst, Brunner, & Siegrist, 2011). Similar complexities have been observed with respect to gourmet foods, which can more specifically be characterized as ‘authentic’ or ‘exotic’ (Johnston & Baumann, 2007). Our picture of pure foods showed natural products, a category that is more difficult to define and to identify than eco-labelled products (Amos, Pentina, Hawkins, & Davis, 2014). It should also be noted that the pictures of gourmet foods and pure foods displayed some items that were unpackaged. This may have had a special meaning for consumers, as the absence of packaging may provide a more ‘authentic’ or ‘pure’ image. The role of packaging, however, is currently confusing and consumers may believe it is more hygienic to buy their food packaged. This type of beliefs on product attributes may need further attention. The self-descriptions relating to food and eating (FIFQ items) also offer promising opportunities for further research. This includes the format of the items, which was adapted from the Portrait Value Questionnaire (PVQ), developed by Schwartz et al. (2001). Each portrait was based on two sentences, but it might be better to use a single sentence, as Schwartz et al. (2012) have done in the new version of the PVQ. This approach may also help in creating varied self-descriptions to learn more about each of the four quadrants of involvement and value motivation.

More generally, it is vital to consider whether and how consumers with different value motivations are able to adapt their choices to the constraints of day-to-day living. That is, how they bridge the gap in abstraction between their notion of food and concrete and detailed features of a meal, such as its size and composition at a particular time of the day. For example, some preliminary work we have done indicates that individuals who are promotion-oriented and highly involved (‘gourmets’) may develop skills in using leftovers to cut preparation time. Such research can be properly informed by in-depth interviews to analyze the value motivations, beliefs and food practices of particular individuals in the light of cultural transitions, such as the rise of the organic

movement (see for a recent example Schösler et al. (2013)). The connection with cultural transitions may be crucial to see consumers in their role of co-creators of the market (Scholliers, 2007). Future research may examine each of the different ways of relating to food and consider how they can be linked to significant transitions towards more healthy and more sustainable diets.

In conclusion, the comparative analysis of broad affinities can give important information on differences in value motivation underlying the food preferences of a large population. This can help to understand the differential effectiveness of interventions and the potential promotion- or prevention benefits of products or diets. Strategies that aim to achieve an ethical transformation of consumer behavior presuppose that consumers care about the quality of their judgments. This applies to consumers with affinities for gourmet foods and pure foods who may be sensitive to the issues raised in an ethical appeal, particularly, when they recognize its promotion- or prevention benefits. The relatively large group of consumers who did not show high levels of care about the quality of their food choices, has to be approached in other ways. A useful intervention strategy is to redevelop and improve each type of products (conventional, efficient, gourmet and pure) so that they become more healthy and more sustainable. Interventions that neglect consumer affinities will be hampered by social and cultural barriers.

Reference List

Ainslie, A. & Rossi, P. E. (1998). Similarities in choice behavior across product categories. *Marketing Science, 17,* 91-106.

Amos, C., Pentina, I., Hawkins, T. G., & Davis, N. (2014). "Natural" labeling and consumers' sentimental pastoral notion. *Journal of Product & Brand Management, 23,* 268-281.

Avnet, T., Laufer, D., & Higgins, E. T. (2013). Are all experiences of fit created equal? Two paths to persuasion. *Journal of Consumer Psychology, 23,* 301-316.

Baker, S., Thompson, K. E., & Engelken, J. (2004). Mapping the values driving organic food choice: Germany vs the UK. *European Journal of Marketing, 38,* 995-1012.

Bezawada, R. & Pauwels, K. (2013). What is special about marketing organic products? How organic assortment, price, and promotions drive retailer performance. *Journal of Marketing, 77,* 31-51.

Bohns, V. K., Lucas, G. M., Molden, D. C., Finkel, E. J., Coolsen, M. K., Kumashiro, M. et al. (2013). Opposites fit: Regulatory focus complementarity and relationship well-being. *Social Cognition, 31,* 1-14.

Botonaki, A. & Mattas, K. (2010). Revealing the values behind convenience food consumption. *Appetite, 55,* 629-638.

Bourdieu, P. (1984). *Distinction: A social critique of the judgment of taste.* (R. Nice, Trans). London: Routledge & Kegan Paul (Original work published in 1979).

Brunner, T. A., van der Horst, K., & Siegrist, M. (2010). Convenience food products. Drivers for consumption. *Appetite, 55,* 498-506.

Buckley, M., Cowan, C., & McCarthy, M. (2007). The convenience food market in Great Britain: Convenience food lifestyle (CFL) segments. *Appetite, 49,* 600-617.

Bullard, O. & Manchanda, R. V. (2013). Do sustainable products make us prevention focused? *Marketing Letters, 24,* 177-189.

Candel, M. J. J. M. (2001). Consumers' convenience orientation towards meal preparation: Conceptualization and measurement. *Appetite, 36,* 15-28.

Chernev, A. (2004). Goal orientation and consumer preference for the status quo. *Journal of Consumer Research, 31,* 557-565.

Chernev, A. (2004). Goal-attribute compatibility in consumer choice. *Journal of Consumer Psychology, 14,* 141-150.

Combet, E., Jarlot, A., Aidoo, K. E., & Lean, M. E. (2014). Development of a nutritionally balanced pizza as a functional meal designed to meet published dietary guidelines. *Public Health Nutrition, 17,* 2577-2586.

de Boer, J. (2010). The role of prevention-oriented attitudes towards nature in people's judgment of new applications of genomics techniques in soil ecology. *Public Understanding of Science, 19,* 654-668.

de Boer, J., Hoogland, C. T., & Boersema, J. J. (2007). Towards more sustainable food choices: Value priorities and motivational orientations. *Food Quality and Preference, 18,* 985-996.

de Boer, J., Schösler, H., & Boersema, J. J. (2013). Motivational differences in food orientation and the choice of snacks made from lentils, locusts, seaweed or "hybrid" meat. *Food Quality and Preference, 28,* 32-35.

Finn, A. (1988). Print ad recognition readership scores: An information processing perspective. *Journal of Marketing Research, 25,* 168-177.

Fischler, C. (1980). Food habits, social change and the nature/culture dilemma. *Social Science Information, 19,* 937-953.

Haws, K. L., Dholakia, U. M., & Bearden, W. O. (2010). An assessment of chronic regulatory focus measures. *Journal of Marketing Research, 47,* 967-982.

Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist, 52,* 1280-1300.

Higgins, E. T. (2002). How self-regulation creates distinct values: The case of promotion and prevention decision making. *Journal of Consumer Psychology, 12,* 177-191.

Higgins, E. T. (2012). *Beyond pleasure and pain: How motivation works*. New York: Oxford University Press.

Holt, D. B. (2012). Constructing sustainable consumption: From ethical values to the cultural transformation of unsustainable markets. *The Annals of the American Academy of Political and Social Science, 644,* 236-255.

Huddleston, P., Whipple, J., Mattick, R. N., & Lee, S. J. (2009). Customer satisfaction in food retailing: Comparing specialty and conventional grocery stores. *International Journal of Retail & Distribution Management, 37,* 63-80.

Hughner, R. S., McDonagh, P., Prothero, A., Shultz, C. J., & Stanton, J. (2007). Who are organic food consumers? A compilation and review of why people purchase organic food. *Journal of Consumer Behaviour, 6,* 94-110.

Johnston, J. & Baumann, S. (2007). Democracy versus distinction: A study of omnivorousness in gourmet food writing. *American Journal of Sociology, 113,* 165-204.

Jost, J. T., Federico, C. M., & Napier, J. L. (2009). Political ideology: Its structure, functions, and elective affinities. *Annual Review of Psychology, 60,* 307-337.

Kitsawad, K. & Guinard, J. X. (2014). Combining means-end chain analysis and the Portrait Value Questionnaire to research the influence of personal values on food choice. *Food Quality and Preference, 35,* 48-58.

Lairon, D. (2012). Biodiversity and sustainable nutrition with a food-based approach. In B. Burlingame & S. Dernini (Eds.), *Sustainable diets and biodiversity: Directions and solutions for policy, research and action* (pp. 30-35). Rome: Food and Agriculture Organization of the United Nations.

Lang, T. (2010). From 'value-for-money' to 'values-for-money'? Ethical food and policy in Europe. *Environment and Planning A, 42,* 1814-1832.

Lang, T. (2012). Sustainable diets and biodiversity: The challenge for policy, evidence and behaviour change. In B. Burlingame & S. Dernini (Eds.),

Sustainable diets and biodiversity: Directions and solutions for policy, research and action (pp. 20-26). Rome: Food and Agriculture Organization of the United Nations.

Marshall, D. W. & Bell, R. (2004). Relating the food involvement scale to demographic variables, food choice and other constructs. *Food Quality and Preference, 15,* 871-879.

Micheelsen, A., Havn, L., Poulsen, S. K., Larsen, T. M., & Holm, L. (2014). The acceptability of the New Nordic Diet by participants in a controlled six-month dietary intervention. *Food Quality and Preference, 36,* 20-26.

Mithril, C., Dragsted, L. O., Meyer, C., Blauert, E., Holt, M. K., & Astrup, A. (2012). Guidelines for the new Nordic diet. *Public Health Nutrition, 15,* 1941-1947.

Oberecker, E. M., Riefler, P., & Diamantopoulos, A. (2008). The consumer affinity construct: Conceptualization, qualitative investigation, and research agenda. *Journal of International Marketing, 16,* 23-56.

Ohly, H., Pealing, J., Hayter, A. K., Pettinger, C., Pikhart, H., Watt, R. G. et al. (2013). Parental food involvement predicts parent and child intakes of fruits and vegetables. *Appetite, 69,* 14.

Olsen, N. V., Menichelli, E., Sørheim, O., & Næs, T. (2012). Likelihood of buying healthy convenience food: An at-home testing procedure for ready-to-heat meals. *Food Quality and Preference, 24,* 171-178.

Padilla Bravo, C., Cordts, A., Schulze, B., & Spiller, A. (2013). Assessing determinants of organic food consumption using data from the German National Nutrition Survey II. *Food Quality and Preference, 28,* 60-70.

Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology, 63,* 539-569.

Pollard, T. M., Steptoe, A., & Wardle, J. (1998). Motives underlying healthy eating: Using the Food Choice Questionnaire to explain variation in dietary intake. *Journal of Biosocial Science, 30,* 165-179.

Pula, K., Parks, C. D., & Ross, C. F. (2014). Regulatory focus and food choice motives. Prevention orientation associated with mood, convenience, and familiarity. *Appetite, 78,* 15-22.

Rozin, P. (1976). The selection of food by rats, humans and other animals. In J. Rosenblatt, R. A. Hinde, C. Beer, & E. Shaw (Eds.), *Advances in the study of behavior, Vol. 6* (pp. 21-76). New York, NY: Academic Press.

Russell, G. J. & Petersen, A. (2000). Analysis of cross category dependence in market basket selection. *Journal of Retailing, 76,* 367-392.

Ryan, R. M. & Deci, E. L. (2000). The darker and brighter sides of human existence: Basic psychological needs as a unifying concept. *Psychological Inquiry, 11,* 319-338.

Schifferstein, H. N. J. & Oude Kamphuis, P. A. M. (1998). Health-related determinants of organic food consumption in the Netherlands. *Food Quality and Preference, 9*, 119-133.

Scholliers, P. (2007). Novelty and tradition. The new landscape for gastronomy. In P. Freedman (Ed.), *Food. The history of taste* (pp. 332-357). Berkeley, CA: University of California Press.

Schösler, H., de Boer, J., & Boersema, J. J. (2012). Can we cut out the meat of the dish? Constructing consumer-oriented pathways towards meat substitution. *Appetite, 58*, 39-47.

Schösler, H., de Boer, J., & Boersema, J. J. (2013). The organic food philosophy. A qualitative exploration of the practices, values, and beliefs of Dutch organic consumers within a cultural-historical frame. *Journal of Agricultural and Environmental Ethics, 26,* 439-460.

Schösler, H., de Boer, J., & Boersema, J. J. (2014). Fostering more sustainable food choices: Can Self-Determination Theory help? *Food Quality and Preference, 35,* 59-69.

Schösler, H., de Boer, J., Boersema, J. J., & Aiking, H. (2015). Meat and masculinity among young Chinese, Turkish and Dutch adults in the Netherlands. *Appetite, 89,* 152-159.

Schwartz, S. H., Cieciuch, J., Vecchione, M., Davidov, E., Fischer, R., Beierlein, C. et al. (2012). Refining the theory of basic individual values. *Journal of Personality and Social Psychology, 103*, 663-688.

Schwartz, S. H., Melech, G., Lehmann, A., Burgess, S., Harris, M., & Owens, V. (2001). Extending the cross-cultural validity of the theory of basic human values with a different method of measurement. *Journal of Cross-Cultural Psychology, 32,* 519-542.

Sengupta, J. & Zhou, R. (2007). Understanding impulsive eaters choice behaviors: The motivational influences of regulatory focus. *Journal of Marketing Research, 44,* 297-308.

Simmons, W. K., Martin, A., & Barsalou, L. W. (2005). Pictures of appetizing foods activate gustatory cortices for taste and reward. *Cerebral Cortex, 15,* 1602-1608.

Spiegel, S., Grant-Pillow, H., & Higgins, E. T. (2004). How regulatory fit enhances motivational strength during goal pursuit. *European Journal of Social Psychology, 34,* 39-54.

Torjusen, H., Lieblein, G., Wandel, M., & Francis, C. A. (2001). Food system orientation and quality perception among consumers and producers of organic food in Hedmark County, Norway. *Food Quality and Preference, 12,* 207-216.

Tudoran, A. A., Scholderer, J., & Brunsø, K. (2012). Regulatory focus, self-efficacy and outcome expectations as drivers of motivation to consume healthy food products. *Appetite, 59,* 243-251.

Ullrich, N. V., Touger-Decker, R., O'Sullivan-Maillet, J., & Tepper, B. J. (2004). PROP taster status and self-perceived food adventurousness influence food preferences. *Journal of the American Dietetic Association, 104,* 543-549.

van der Horst, K., Brunner, T. A., & Siegrist, M. (2011). Fast food and take-away food consumption are associated with different lifestyle characteristics. *Journal of Human Nutrition and Dietetics, 24*, 569-602.

van Dooren, C., Marinussen, M., Blonk, H., Aiking, H., & Vellinga, P. (2014). Exploring dietary guidelines based on ecological and nutritional values: A comparison of six dietary patterns. *Food Policy, 44*, 36-46.

van Otterloo, A. H. (2000). The Low Countries. In K. F. Kiple & K. C. Ornelas (Eds.), *The Cambridge world history of food* (pp. 1232-1240). Cambridge: Cambridge University Press.

Verbeke, W. & Vackier, I. (2004). Profile and effects of consumer involvement in fresh meat. *Meat Science, 67*, 159-168.

Wang, J. & Lee, A. Y. (2006). The role of regulatory focus in preference construction. *Journal of Marketing Research, 43*, 28-38.

Westjohn, S. A., Arnold, M. J., Magnusson, P., Zdravkovic, S., & Zhou, J. X. (2009). Technology readiness and usage: A global-identity perspective. *Journal of the Academy of Marketing Science, 37*, 250-265.

Wycherley, A., McCarthy, M., & Cowan, C. (2008). Speciality food orientation of food related lifestyle (FRL) segments in Great Britain. *Food Quality and Preference, 19*, 498-510.

Zhou, R. R. & Pham, M. T. (2004). Promotion and prevention across mental accounts: When financial products dictate consumers' investment goals. *Journal of Consumer Research, 31*, 125-135.

858 Table 1

859 Demographics of the women and men who were active in purchasing and/or cooking.

	Women		Men	
	Active	Non-active	Active	Non-active
	(*n* = 488)	(*n* = 53)	(*n* = 254)	(*n* = 288)
	%	%	%	%
Age				
18-34	21_{a}	70_{c}	11_{b}	$18_{a,b}$
35-54	45_{a}	8_{c}	$42_{a,b}$	35_{b}
55-74	$30_{a,b,c}$	19_{b}	39_{c}	$38_{a,c}$
75 and over	4_{a}	4_{a}	7_{a}	8_{a}
	(100)	(101)	(99)	(99)
Education				
Primary and lower secondary	$35_{a,b}$	$32_{a,b}$	30_{b}	42_{a}
Upper secondary	33_{a}	23_{a}	31_{a}	26_{a}
Tertiary	32_{a}	45_{a}	39_{a}	32_{a}
	(100)	(100)	(100)	(100)
Household size				
One person	6_{a}	$2_{a,b}$	9_{a}	0_{b}
Two persons	44_{a}	28_{a}	46_{a}	45_{a}
Three persons	15_{a}	15_{a}	15_{a}	13_{a}
Four persons	$25_{a,b}$	$30_{a,b}$	19_{b}	30_{a}
Five or more persons	10_{a}	25_{b}	$11_{a,b}$	$12_{a,b}$
	(100)	(100)	(100)	(100)

Migration status				
Natives	89_a	92_a	90_a	93_a
Migrants	11_a	8_a	10_a	7_a
	(100)	(100)	(100)	(100)

Note: Percentages with the same subscript letter within rows do not differ significantly from each other (z-test with Bonferroni correction, $p > .05$).

Table 2

Self-descriptions relating to food and eating (FIFQ items), female version: mean rating, SD, common space coordinates (mirrored on both axes)

			Common space coordinates	
Items	M	SD	Dimension 1	Dimension 2
She is very mindful of food. She wants to eat sensibly.	4.25	1.27	.61	-.44
She feels proud of her taste. She believes that her food choices are very attractive.	4.55	1.23	.60	.14
She likes to vary her meal. She is curious about new tastes.	5.02	1.40	.56	.34
She prefers natural products. She would really like her food fresh from the garden.	4.57	1.44	.47	-.30
She likes many different foods. She is also a great taster.	5.30	1.31	.41	.27
She is grateful for her meal. In her view everything that is edible deserves respect.	4.32	1.34	.29	-.62
She enjoys eating well. In her view every meal should be festive.	4.19	1.35	.26	.53
She is a big eater. She loves to have plenty of palatable foods.	3.55	1.66	-.34	.54
She prefers an ordinary meal. She is happy with meat and two vegetables.	4.26	1.86	-.54	-.41
She is easy about cooking. She uses a lot of ready-made products in her meals.	3.17	1.76	-.73	.14
Food does not bother her. She has no special demands on it.	3.27	1.83	-.78	-.08
She eats because she has to. Meals are not important to her.	2.75	1.72	-.79	-.10

Notes: n = 742. All items have been centered (rating scale: 1= not like me at all, 7= very much like me). The common space coordinates have been mirrored on both axes.

Normalized Raw Stress .019

870

871 Table 3

872 Results of multinomial logistic regression models predicting the food type affinities.

	Odds Ratio		
Predictor	Picture 2 (efficient) (10%)	Picture 3 (gourmet) (33%)	Picture 4 (pure) (7%)
Model 1			
Likes to vary (promotion, highly involved)	1.05	1.31**	.96
Mindful of food (prevention, highly involved)	1.39*	1.17	1.96***
Prefers natural products (prevention, highly involved)	.89	1.31**	2.27***
Easy about cooking (promotion, lowly involved)	1.62**	1.03	.91
Prefers ordinary meal (prevention, lowly involved)	.76	.51***	.33***
Model 2			
Likes to vary (promotion, highly involved)	.99	1.29*	.95
Mindful of food (prevention, highly involved)	1.44*	1.11	1.89**
Prefers natural products (prevention, highly involved)	.97	1.27*	2.24***
Easy about cooking (promotion, lowly involved)	1.48*	.98	.89
Prefers ordinary meal (prevention,	.89	.56***	.38***

lowly involved)			
Age	.53***	1.07	1.16
Level of education	1.50**	1.55***	1.74**
Household size	1.07	.79*	.98
Migrants	1.10	1.37**	1.54**

Notes: n = 742. The reference category is affinity for Picture 1; all predictors have been standardized; Nagelkerke R^2 = .269 (model 1), .350 (model 2).

$^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Table 4

Differences between the food type affinities for the predictor variables.

	Picture 1 (conventional)	Picture 2 (efficient)	Picture 3 (gourmet)	Picture 4 (pure)
Likes to vary (promotion, highly involved)	$-.10_{a}$	$.06_{a}$	$.40_{b}$	$.60_{b}$
Mindful of food (prevention, highly involved)	$-.09_{a}$	$.20_{ab}$	$.25_{b}$	1.01_{c}
Prefers natural products (prevention, highly involved)	$-.08_{a}$	$-.18_{a}$	$.32_{b}$	1.06_{c}
Easy about cooking (promotion, lowly involved)	$.19_{a}$	$.67_{b}$	$-.03_{c}$	$-.33_{d}$
Prefers ordinary meal (prevention, lowly involved)	$.44_{a}$	$.33_{a}$	$-.26_{b}$	$-.59_{c}$
Age	$.15_{a}$	$-.43_{b}$	$.20_{a}$	$.43_{a}$
Level of education	$-.17_{a}$	$.51_{b}$	$.35_{b}$	$.73_{b}$
Household size	$.15_{ab}$	$.60_{a}$	$-.04_{b}$	$.24_{ab}$
Migrants	$-.09_{a}$	$.09_{ab}$	$.34_{bc}$	$.78_{c}$

Notes: n = 742. All predictors have been standardized ($M = 0$, $SD = 1$); means with different subscript letter differ significantly ($p < .05$) in one-way ANOVAs with Bonferroni's post-hoc test.

Figure 1

Photos of the four types of foods (presented without text), from top left clockwise picture 1 (conventional), 2 (efficient), 3 (gourmet) and 4 (pure).

Figure 2

Photos of the seven outlets (presented without text), from top left clockwise picture A (regular supermarket), B (natural foods shop), C (outdoor market), D (ethnic market), E (discount supermarket), F (take-away 'traiteur') and G (neighbourhood supermarket).

Figure 3

Positions of the self-descriptions (FIFQ items) in the two dimensional framework of involvement and type of value motivation (results of multidimensional scaling, *n* = 742, model = interval, normalized raw stress = .019, the items were mirrored on both axes).